

## CLAIMS

1.      Jointed mirror arm with at least two tubular parts that are joined to one another via a joint having a tilted mirror and that are to be arranged at different solid angles to one another because of said joint and that form a beam path for the radiation, with a stationary inlet at a first tubular part for introducing radiation  
5      from a stationary optical source, and with any desired outlet site of said intermediate jointed arm that is different from the inlet site and that is on a last tubular part for the radiation outlet, characterized in that a scanner for the radiation is arranged upstream of said inlet of said intermediate jointed arm and in that an  
10     optical imaging system forming said scanner is provided at a site downstream of said outlet of said intermediate jointed arm in the at least two tubular parts of said intermediate jointed arm.
2.      Jointed mirror arm in accordance with claim 1, characterized in that said imaging system is embodied with a plurality of imaging stages.
- 15     3.      Jointed mirror arm in accordance with claim 1 or 2, characterized in that said imaging stage is provided with at least two lenses having an intermediate focal point therebetween.

4. Jointed mirror arm in accordance with any of claims 1 through 3, characterized in that said lenses forming said imaging stage are embodied as a relay lens system.

5 5. Jointed mirror arm in accordance with any of claim 1 through 4, characterized in that no tilted mirror is arranged at locations of the beam path with an intermediate focal point.

6. Jointed mirror arm in accordance with any of claims 1 through 5, characterized by image rotation optics for compensating the image coordinate rotation.

10 7. Jointed mirror arm in accordance with any of claims 1 through 6, characterized by a measurement system for measuring said image coordinate rotation.

15 8. Jointed mirror arm in accordance with any of claims 1 through 7, characterized by a drive for said image rotation optics, which drive is controlled using the results of the measurement by said measurement system for compensating said image coordinate rotation.